

MEMORANDUM

SMF-4J

DATE: June 5, 2001

SUBJECT: Review of the *First Revision* Quality Assurance Project Plan (QAPP) for the PRP-Lead Engineering Evaluation/Cost Analysis (EE/CA) Activities for the **Fansteel, Inc.** at Number One Tantalum Place, North Chicago, Illinois

FROM: Richard L Byvik *Richard L Byvik*  
Field Services Section (FSS)

TO: John J. O'Grady  
Remedial Project Manager

I have reviewed the *first revision* QAPP for the PRP-Lead EE/CA activities for the **Fansteel, Inc.**, Number One Tantalum Place, North Chicago, Illinois. I do not recommend approval of the subject QAPP. The subject QAPP was received by FSS on April 26, 2001, Log-in # 2712.

Attached to this memorandum are FSS comments and recommendations that describe the deficiencies and provide guidance for their resolution.

If there are any questions regarding this memorandum, contact Richard Byvik (312.353.3114) of the FSS Staff.

cc: Steve Ostrodka, SMF-4J



**FANSTEEL, INC.**  
**NUMBER ONE TANTALUM PLACE**  
**NORTH CHICAGO, ILLINOIS**

**QUALITY ASSURANCE PROJECT PLAN (QAPP)**

**COMMENTS:**

This should be considered a first revision QAPP, not a "Revision 0" QAPP. The next QAPP submission will be a "Revision 2" QAPP. Please amend the Document Control Format accordingly.

Future QAPPs for this site must be prepared according to the REGION 5  
*"INSTRUCTIONS ON THE PREPARATION OF SUPERFUND DIVISION QUALITY  
ASSURANCE PROJECT PLAN"*, REVISION 0, JUNE 2000.

**I                    TITLE/APPROVAL PAGE**

Signature lines for the **Great Lakes Analytical (GLA)** and **Geotechnics Laboratory** Directors must be on the Title/Approval page.

**II                    PROJECT DESCRIPTION**

- A      Section 1.5  
The Administrative Order of September 21, 2000, cites **manganese** as a  
"hazardous substance" in Section IV, items 2. and 6.b. Please verify, whether or  
not, **manganese** is a project required metal. If so, Include **manganese** in Table 3.
- B      Section 1.7.2  
Table 4 was not included. Please provide.

**III                   PROJECT ORGANIZATION AND RESPONSIBILITY**

Describe the project responsibilities for the **State Project Manager**, if relevant. The  
Approval page has a signature line for the **State Project Manager**.

**IV                   QA OBJECTIVES FOR MEASUREMENT**

- A      Sections 3.1.3 and 3.2.3  
Section 4.20 of the **Geotechnics** Quality Assurance Program (QAP) was not  
provided. Appendix E contains **Geotechnics** "Statement of Qualifications", not  
the **Geotechnics** QAP.

- B Section 3.1.3  
Provide project specific quality control (QC) acceptance criteria for laboratory precision.
- C Section 3.2.3  
Provide project specific QC acceptance criteria for laboratory accuracy.
- D Section 3.2.3 typo  
The reference to Section 8.6.5.1, perhaps should be, Section 8.10.1.

## V CUSTODY PROCEDURES

- A Section 5.1, page 2 of 3  
The designation **TB** has multiple meanings. Please resolve the disparity.
- B Section 5.2  
Sections 4.12 and 4.15 of the **Geotechnics** QAP were not provided.

## VI CALIBRATION PROCEDURES AND FREQUENCY

- Section 6.2  
Section 4.11 of the **Geotechnics** QAP was not provided.

## VII ANALYTICAL PROCEDURES

- Section 7.2, also Table 1
- Designate the laboratory that will be performing each of the chemical and geotechnical analysis.
  - Section 5.3, page 17, of the Work Plan specifies Soil (chemical analyses) for **total organic carbon (TOC), moisture content, and cation exchange capacity (CEC)**. The laboratory performing these analyses must provide standard operating procedures (SOPs).
  - Provide some project required reporting limits for **TOC**, such as, % Organic Matter, and for **CEC**, such as, milliequivalents **Na** per gram.
  - Verify if **manganese** should be included.

## VIII INTERNAL QC CHECKS

- Section 8.2  
Sections 4.20 and 4.9 of the **Geotechnics** QAP were not provided.

## IX DATA REDUCTION, VALIDATION, AND REPORTING

- Section 9.2.2
- Since a Streamlined Risk Evaluation is going to be done, the **Earth Sciences'** QA Manager should perform the laboratory data validation.

- Data validation must be performed by an entity independent of the laboratory management, such as, the QA Manager. Section 2.10 of the **GLA QAP** implies that the President, or Laboratory Director, may fill in for the QA Manager.

## **X PERFORMANCE AND SYSTEM AUDITS**

### Section 10.2.1

Section 4.9 of the **Geotechnics QAP** was not provided.

## **XI CORRECTIVE ACTION**

### Section 13.2

Section 4.14 of the **Geotechnics QAP** was not provided.

## **ENGINEERING EVALUATION/COST ANALYSIS** **WORK PLAN**

- A** Section 5.3  
The Administrative Order of September 21, 2000, cites **manganese** as a “hazardous substance” in Section IV, items 2. and 6.b. Please verify, whether or not, **manganese** is a project required metal. If so, Include **manganese** in Table 2.
- B** Section 5.3 *Soil (chemical analyses)*  
Identify the laboratory that will perform these analyses, and provide SOPs for **total organic carbon, moisture content, and cation exchange capacity** analyses. Moisture content is determined in the ASTM Method D2974-87 for determining % Organic Matter.
- C** Section 10.0  
Provide a copy of the **Health and Safety Plan**.

**APPENDIX C**  
**EARTH SCIENCES CONSULTANTS, INC.**  
**STANDARD OPERATING PROCEDURES**

- A** Section C.1.1.3  
Provide copies of the chain-of-custody (COC), sample labels, and custody seals. Perhaps, the project should provide their own COC, rather than use the **GLA** COC for samples sent to **GLA**, and the **Geotechnics** COC for samples sent to **Geotechnics**. Besides, **Geotechnics** did not provide a COC.
- B** Section C.1.1.3.4.5  
Dissolved metal samples must be field filtered within 15 minutes.
- C** Section C.1.1.5  
Hexane, methanol, and nitric acid are not recommended for decontamination. These chemicals are hazardous. Nitric acid may elevate metals concentration.
- D** Section C.3.3.2  
Include a subsection for collecting field duplicates, since field duplicates are being collected. See QAPP Table 1. Field duplicates are not the same as laboratory replicates.

**APPENDIX D**  
**GREAT LAKES ANALYTICAL QUALITY ASSURANCE PROGRAM**

- A** Provide SOP for the analysis of Volatile Organics by GC/MS, **GLA 8260-BG**.
- B** **GLA 3015 BG and GLA 3050 BG**  
Tantalum could be added to these digestion procedures.

**APPENDIX E**  
**GEOTECHNICS STATEMENT OF QUALIFICATIONS**

- A** **Geotechnics** must provide SOPs on Sample Log-in, Storage, Internal Chain-of-Custody, and Sample Disposal.
- B** **Geotechnics** must provide SOPs for the determination of **Soil (chemical analysis)**, total organic carbon, or % organic carbon (ASTM Method D2974-87), and cation exchange capacity (Method ASA/ASSA), or copies of the methods that will be used, assuming **Geotechnics** will be doing these analyses. Moisture content is determined by ASTM Method D2974-87.
- C** **Geotechnics** should provide SOPs, or copies of the methods used for **Soil (geotechnical analyses)**.